

## Abstract

The invention relates to a method and system for wideband digital pre-distortion linearization, which is used to overcome the influence of memory effect in radio frequency power amplifier, to expand digital pre-distortion linearization bandwidth, and to improve digital pre-distortion linearization performance. The method and system can get an in-band pre-distortion signal and an out-of-band pre-distortion signal according to the characteristic parameter of the amplifier; the in-band pre-distortion signal is up-converted and the up-converted signal is added to the out-of-band pre-distortion signal, which is not up-converted, then the combined signal is inputted to the power amplifier as an input signal; a part of the output signal from the power amplifier, serving as a feedback signal, can be compared with the original input signal, and the characteristic parameter of the amplifier for generating the in-band pre-distortion signal and the out-of-band pre-distortion signal is adaptively regulated according to the comparison result, so that the waveform of time domain or the frequency domain of the feedback signal can be close to that of the original input signal as much as possible.